

SPECTROSCOPIC SYSTEM AND METHOD USING A CERAMIC OPTICAL REFERENCE

ABSTRACT OF THE DISCLOSURE

A ceramic reference in conjunction with a spectrometer, a metallized ceramic material, and a method of utilizing a ceramic material as a reference in the ultraviolet, visible, near-infrared, or infrared spectral regions are presented. The preferred embodiments utilize a ceramic reference material to diffusely reflect incident source light toward a detector element for quantification in a reproducible fashion. Alternative embodiments metallize either the incident surface or back surface of to form a surface diffuse reflectance standard. Optional wavelength reference layers or protective layers may be added to the ceramic or to the metallized layer. The reference ceramic is used to provide a measure of optical signal of an analyzer as a function of the analyzers spatial, temporal, and environmental state.